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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			EXAMINER TALBOT, BRIAN K	
			ART UNIT	PAPER NUMBER
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			MAIL DATE	DELIVERY MODE
			10/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/674,017

Applicant(s)

BAEK ET AL.

Examiner

Brian K. Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The amendment filed 8/6/07 has been considered and entered. Claims 1-13 remain in the application.

2. The amendment filed 8/6/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The separating "mechanically" the master from the substrate is not found anywhere in the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

3. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See above for explanation.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

5. Claims 1-4 and 6-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hattori et al. (5,403,616).

Hattori et al. (5,403,616) teaches a method of forming patterned transparent conductive film. The patterning process comprises forming a masking pattern (2) on a substrate (10), applying the coating layer (3), heating the coating layer and the mask to set the coating layer and remove the mask to form the patterned layer (abstract, Figs. 1a-1e, 2a-2e and col. 2, line 60 – col. 3, line 65). Hattori et al. (5,403,616) teaches the process utilized for LCD devices (col. 1, lines 9-25). The glass substrate can have a coating of silica thereon prior to the application of the patterned coating layer (examples). The coating layer can be applied by spin coating, dip coating or roll coating (col. 4, lines 41-64). Hattori et al. (5,403,616) teaches physically removing the masking pattern by ultrasonic cleaning or gas jet of air (col. 4, lines 28-40).

With respect to claims 3 and 10 which recite supplying the resist material with a doctor blade, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar success with a doctor blade applicator as opposed to roller applicator for the material as both process for forming layers and filling openings are commonplace in the art. Furthermore, Hattori et al. (5,403,616) teaches screen printing the masking material which is known to use a doctor blade to apply material

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through a masking/screen. The Examiner recognizes that the resist material is being claimed as the coating material and not the masking material of Hattori et al. (5,403,616), it is the Examiner's position that this supports the Examiner's position that utilizing a doctor blade in conventional in the art.

With respect to claims 4,11 and 13 which recite separating the master and the substrate by a few micrometers, it is the Examiner's position that one skilled in the art would have had a reasonable expectation of achieving similar success regardless of whether or not the master was "displaced" from the substrate or directly contacting it. This would be a matter of design choice by one practicing in the art as both processes are known to produce desirable results for forming a patterned layer.

Claim Rejections - 35 USC § 103

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (5,403,616) in combination with Applicant's admitted state of the art (specification pg. 2-5 and Figs. 1-2).

Hattori et al. (5,403,616) fails to teach an etching layer being metal.

Applicant's admitted state of the art (specification pg. 2-5 and Figs. 1-2) teaches that gate electrodes, drain electrodes and pixel electrodes are formed on a glass substrate for LCD manufacture.

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified over Hattori et al. (5,403,616) process by including a metal electrode

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layer to be etched as evidenced by Applicant's admitted state of the art (specification pg. 2-5 and Figs. 1-2) with the expectation of achieving similar success, i.e. a patterned layer.

7. Claims 1-4 and 6-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (5,403,616) in combination with Berg (2005,0170291).

Features detailed above concerning Hattori et al. (5,403,616) are incorporated here.

Hattori et al. (5,403,616) fails to teach "mechanical" separating the master from the substrate.

Berg (2005,0170291) teaches a process and apparatus for manufacturing a printed circuit board. A patterned mask is applied to a substrate followed by etching or plating to form the printed pattern (abstract). After etching or plating the mask is removed by chemical or mechanical means ([0088]-[0094]).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Hattori et al. (5,403,616) process to include a masking material removed by "mechanical means" as evidenced by Berg (2005,0170291) with the expectation of achieving similar success, i.e. a patterned coating.

Response to Amendment

8. Applicant's arguments filed 8/6/07 have been fully considered but they are not persuasive.

Applicant argued that the prior art fails to teach “mechanically” separating the master from the substrate as the prior art teaches “decomposing” the mask.

The Examiner agrees in part. While the Examiner acknowledges the fact that Hattori et al. (5,403,616) teaches decomposing the masking pattern, Hattori et al. (5,403,616) also teaches teaches physically removing the masking pattern residue by ultrasonic cleaning or gas jet of air (col. 4, lines 28-40). This would meet the limitation of mechanically separating. In addition, Berg (2005,0170291) teaches removing a mask from a substrate by mechanical means.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 8AM-4PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 10/3/07
Brian K Talbot
Primary Examiner
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BKT